

## II. Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 1-16 under 35 U.S.C. 103(a) as being unpatentable over Lee *et al.*, (US 2004/0013359 A1) [“Lee”] in view of Duck *et al.*, (US 6,438,291) [“Duck”]. For at least the following reasons, Applicant traverses the rejection.

Claim 1 recites a planar lightwave circuit comprising “an optical device, where the optical device comprises at least one piece of waveguide structure, in particular a piece of fiber, which has at least one thin film layer deposited on an end facet.” (emphasis added). The Examiner concedes that Lee does not disclose that the waveguide structure is a piece of fiber, but the Examiner applies Duck to allegedly cure the deficiency. The Examiner contends that one skilled in the art would have modified the optical coupling device of Lee “by substituting the angled optical waveguide for an optical fiber coupled to a planar waveguide.” See page 3, 2<sup>nd</sup> full paragraph of Office Action.

Duck relates to a method of coupling light between an optical fiber and a waveguide chip by providing bulk optics such as GRIN lenses to create a hybrid module (see col. 2, line 46 to col. 3, line 15). Accordingly, the invention in Duck provides a method “of coupling light from an optical fibre to a planar waveguide” (col. 3, lines 43-44). (emphasis added). Thus, Duck, at most, relates to the coupling between the optical fiber and waveguide. There is no disclosure or suggestion in Duck that waveguides that are not optical fibers can be substituted by an optical fiber as suggested by the Examiner.

Lee discloses that the optical probe 2000 consists of a substrate 2010 with a waveguide 2060 (paragraph 0027). Applicant submits that this would lead one skilled in the art to conclude that the optical probe of Lee is not a fiber waveguide, but a slab waveguide. Duck provides no

disclosure or suggestion that its invention would be applicable to an invention having an interface between a non-fiber optic waveguide and another non-fiber optic waveguide, as disclosed in Lee. Because, as noted above, Duck only relates to the interface between an optical fiber and a waveguide, not to reasons for choosing a fiber waveguide rather than a slab waveguide, the Examiner's contention that one skilled in the art would have applied the teachings of Duck to the invention of Lee is mere speculation since it is not supported in the prior art. Therefore, the Examiner's proffered reason for combining is not evidence in the record as required by *In re Zurko*, 59 USPQ2d 1693 (Fed. Cir. 2001).

Because claims 2-5 and 12-15 depend on claim 1, Applicant submits that these claims are patentable at least by virtue of their dependencies.

In addition, Applicant submits that the "saturable absorber" as set forth in claim 13 is not disclosed or suggested by Lee and Duck (either taken alone or in combination).

Because one skilled in the art would not have combined the teachings of Duck with Lee for at least the reasons given above with respect to claim 1, and because Lee does not disclose the claimed bundles of fibers, Applicant submits that claim 6 is patentable.

Because one skilled in the art would not have combined the teachings of Duck with Lee for at least the reasons given above with respect to claim 1, and because Lee does not disclose the claimed fibers, Applicant submits that Lee cannot disclose the claimed method of processing an optical device as claimed in claims 7-10.

Because one skilled in the art would not have combined the teachings of Duck with Lee for at least the reasons given above with respect to claim 1, and because neither Lee nor Duck

teach all the claimed elements as set forth in claim 11, these references fail to render obvious Applicant's claim 11.

Applicant submits that claim 16 is patentable at least by virtue of its dependency on claim 11.

**III. Allowable Subject Matter**


Applicant thanks the Examiner for allowing claims 17 and 18.

**IV. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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